New Bonanza Grade Intercepts in Caribou and 27 Zones

Discovery of New Shallow Mineralized Zone - Lynx 3

MONTREAL, QUEBEC--(Marketwired - May 3, 2017) - Osisko Mining Inc. (TSX:OSK)("Osisko" or the "Corporation") is pleased to announce new results from the ongoing drill program at its 100% owned Windfall Lake gold project located in Urban Township, Québec. The current 400,000 metre drill program combines definition drilling above the Red Dog intrusion ("Red Dog"), expansion drilling above and below Red Dog, expansion drilling to the NE of the main deposit, and exploration drilling on the greater deposit and Urban-Barry Project area. Significant new analytical results from eight drill holes focused on infill and expansion drilling in the Caribou, 27, Underdog and Lynx zones are reported in the table below.

Highlights from the new results include: 936 g/t Au over 2.5 metres (32.1 g/t Au over 2.5 metres cut to 100 g/t), including an interval of 4.6 kilograms/t Au over 0.5 metres in hole OSK-W-17-820; 195 g/t Au over 2.6 metres (16.7 g/t Au over 2.6 metres cut to 100 g/t), including an interval of 1.26 kilograms/t Au over 0.4 metres in hole OSK-17-824; 26.0 g/t Au over 2.5 metres (14.0 g/t Au over 2.5 metres cut to 100 g/t) in hole OSK-17-812; 19.2 g/t Au over 2.0 metres in hole OSK-17-807; and 14.1 g/t Au over 2.3 metres in hole OSK-17-832. Maps showing drill hole locations and full analytical results are available at www.osiskomining.com.

Hole No.	From (m)	To (m)	Interval (m)	Au (g/t) uncut	Au (g/t) cut to 100 g/t	Zone	Corridor
OSK-W-17-820	616.5	619	2.5	936	32.1	CS1	Caribou
including	*616.5*	*617.5*	*1.0*	*29.3*			
including	*618.5*	*619.0*	*0.5*	*4620*	*100*		
OSK-W-17-824	28.4	31.0	2.6	195	16.7	PyVN	27
including	*29.6*	*30.0*	*0.4*	*1260*	*100*		
OSK-W-17-812	298.5	301.0	2.5	26.0	14.0	Lynx 2	Lynx
including	*299.7*	*300.0*	*0.3*	*200*	*100*		
OSK-W-17-832	85.0	87.3	2.3	14.1		Lynx 3	Lynx
including	*85.8*	*86.6*	*0.8*	*38.9*			
OSK-W-17-816	670.0	672.8	2.8	5.24		Lynx 1	Lynx
including	*672.4*	*672.8*	*0.4*	*14.7*			
OSK-W-17-827	381.0	383.0	2.0	5.84		Lynx 1	Lynx
OSK-W-17-817	273.3	275.3	2.0	4.4		Lynx 2	Lynx
including	*273.3*	*273.7*	*0.4*	*14.0*			
OSK-W-17-807	623.5	626.5	3.0	3.89		FW0	Underdog
	715.5	717.5	2.0	19.2		FW1	Underdog
including	*715.5*	*716.0*	*0.5*	*51.5*			

Notes:

(1) True Widths are estimated at 65 - 80% of the reported core length interval. See *"Quality Control"* below.

(2) Definitions: FW = foot wall; VNCR = crustiform vein; PyVN = pyrite vein

Hole Number	Azimuth (°)	Dip (°)	Length (m)	UTM E	UTM N	Section
OSK-W-17-807	329.7	-65.2	1171.5	452311	5434424	2325
OSK-W-17-812	330.2	-64.8	379.2	453461	5435034	3625
OSK-W-17-816	147.1	-69.1	1051.5	453469.6	5435215.2	3722
OSK-W-17-817	144.7	-60.4	821.8	453334	5435231.2	3609
OSK-W-17-820	333	-65.2	1105.5	452669	5434484	2667
OSK-W-17-824	330.2	-67.2	220.0	451948	5434608	2099
OSK-W-17-827	144.9	-63.2	957.0	453173	5435126	3418
OSK-W-17-832	145.5	-54.5	573.0	453332	5435229	3609

Caribou Corridor

OSK-W-17-820 is an infill hole testing the CS1 Zone which returned 936 g/t Au over 2.5 metres (32.1 g/t Au over 2.5 metres cut to 100 g/t); the interval contains a bonanza grade intercept of 4.62 kilograms/t Au over 0.5 metres. Mineralization consists of 3 to 4% pyrite in stringers hosted in a strongly bleached andesitic rock. Visible gold was observed in a carbonate-chlorite vein. This interval is located 90 metres East from previously reported hole OSK-W-17-766-W1 which returned 15.6 g/t Au over 5.8 metres.

Zone 27 Corridor

OSK-W-17-824 tested the Zone 27 Corridor intersecting 195 g/t Au over 2.6 metres (16.7 g/t Au over 2.6 metres cut to 100 g/t); the interval contains a bonanza grade intercept of 1.26 kilograms/t Au over 0.4 metres in a semi-massive pyrite vein containing local visible gold. The vein is injected at the contact between a porphyry dike and an andesitic rock. This high grade interval is located 50 metres from the main Zone 27 and represents a new extension of the zone.

Lynx Corridor

OSK-W-17-812 returned 26 g/t Au over 2.5 metres (14.0 g/t Au over 2.5 metres cut to 100 g/t) and includes an interval of 200 g/t Au over 0.3 metres. This new intercept is located in the Lynx 2 Zone. Mineralization is composed of up to 3% pyrite stringers with local visible gold hosted in a smoky quartz vein.

OSK-W-17-832 intersected a new zone of mineralization ("Lynx 3") in the Lynx Corridor, returning 14.1g/t Au over 2.3 metres including 38.9 g/t Au over 0.8 metres. This new zone is located 80 metres NW of the Lynx 2 zone and consists of 6-8% pyrite stringers and local visible gold.

OSK-W-17-816 intersected 5.24 g/t Au over 2.8 metres in a zone containing traces to 2% pyrite-tourmaline stringers associated with strong silica flooding. This interval is located 140 metres SE of the Lynx 1 Zone.

OSK-W-17-827 intersected 5.84 g/t Au over 2.0 metres from a crustiform vein containing up to 7% disseminated pyrite. The vein is hosted in a moderately and chloritized gabbro with fuchsite

OSK-W-17-817 returned 4.4 g/t Au over 2.0 metres from the Lynx 2 Zone. Mineralization consists of 2-5% pyrite stringers hosted in a chlorite-fuchsite altered andesitic rock.

Underdog Corridor

OSK-W-17-807 intersected two zones of mineralization, the first returning 3.89 g/t Au over 3.0 metres from FW0. Mineralization is composed of up to 10% pyrite stringers hosted in a moderately silicified fragmental porphyry dike. A second intercept returned 19.2 g/t Au over 2.0 metres from the FW1 Zone. Mineralization consists of up to 35% pyrite stringers to semi-massive pyrite. This interval is located 160 metres SW from previously reported OSK-W-16-735-W1 (8.70 g/t Au over 6.8 metres).

Qualified Person

The scientific and technical content of this news release has been reviewed, prepared and approved by Mr. Louis Grenier, P.Geo. (OGQ 800), Project Manager of the Windfall Lake gold project, who is a "Qualified Person" as defined by National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101").

Quality Control and Reporting Protocols

True width determinations are estimated at 65 - 80% true core lengths. Assay are uncut except where indicated, and calculated intervals are reported over a minimum length of 2 metres using a lower cutoff of 3 g/t Au. All NQ core assays reported were obtained by either 1 kilogram whole rock metallic screen/fire assay or standard 50 gram fire-assaying with AA or gravimetric finish at ALS Laboratories in Val d'Or, Québec or Sudbury, Ontario. The 1 kilogram metallic screen assay method is selected by the geologist when samples contain coarse gold or present a higher percentage of pyrite than surrounding intervals. All samples are also analyzed for multi-elements, including silver, using an Aqua Regia-ICP-AES method at ALS laboratories. Drill program design, Quality Assurance/Quality Control and interpretation of results is performed by qualified persons employing a Quality Assurance/Quality Control program consistent with NI 43-101 and industry best practices. Standards and blanks are included with every 20 samples for Quality Assurance/Quality Control purposes by the Corporation as well as the lab. Approximately 5% of sample pulps are sent to secondary laboratories for check assays.

About the Windfall Lake Gold Deposit

The Windfall Lake gold deposit is located between Val-d'Or and Chibougamau in the Abitibi region of Québec, Canada. The current mineral resource comprises 2,762,000 tonnes at 8.42 g/t Au (748,000 ounces) in the indicated category and 3,512,000 tonnes at 7.62 g/t Au (860,000 ounces) in the inferred category (sourced from a technical report dated June 10, 2015 entitled "Preliminary Economic Assessment of the Windfall Lake Gold Property, Québec, Canada" with an effective date of April 28, 2015, prepared in accordance with NI 43-101). The Windfall Lake gold deposit is currently one of the highest grade resource-stage gold projects in Canada. The bulk of the mineralization occurs in the Main Zone, a southwest/northeast trending zone of stacked mineralized lenses, measuring approximately 600 metres wide and at least 1,400 metres long. The deposit is well defined from surface to a depth of 500 metres, and remains open along strike and at depth. Mineralization has been identified only 30 metres from surface in some areas and as deep as 870 metres in others, with significant potential to extend

mineralization up and down-plunge and at depth.

About Osisko Mining Inc.

Osisko is a mineral exploration company focused on the acquisition, exploration, and development of precious metal resource properties in Canada. Osisko holds a 100% in the high-grade Windfall Lake gold deposit located between Val-d'Or and Chibougamau in Québec and holds a 100% undivided interest in a large area of claims in the surrounding Urban Barry area (82,400 hectares), a 100% interest in the Marban project located in the heart of Québec's prolific Abitibi gold mining district, and properties in the Larder Lake Mining Division in northeast Ontario, including the Jonpol and Garrcon deposits on the Garrison property, the Buffonta past producing mine and the Gold Pike mine property. The Corporation also holds interests and options in a number of additional properties in northern Ontario. Osisko continues to be well financed with approximately $190 million in cash and investments.

Cautionary Note Regarding Forward-Looking Information

This news release contains "forward-looking information" within the meaning of the applicable Canadian securities legislation that is based on expectations, estimates, projections and interpretations as at the date of this news release. The information in this news release about the Windfall Lake gold deposit being one of the highest grade resource-stage gold projects in Canada; the current 400,000 metre drill program at Red Dog; the significance of new results from the ongoing drill program at the Windfall Lake gold project; new analytics from the eight drill holes focused on infill and expansion drilling in the Caribou, 27, Underdog and Lynx zones; the significance of assay results presented in this press release, including the highlights presented in this press release and the use of the term "bonanza grade intercepts" to describe assay results; the type of drilling included in the drill program (definition drilling above Red Dog, expansion drilling above and below Red Dog, expansion drilling to the NE of the main deposit, and exploration drilling on the greater deposit and Urban-Barry project area); potential mineralization, including the discovery a potential new shallow mineralized zone (Lynx 3) and any high-grade or "bonanza grade" intercepts; the potential to extend mineralization up and down-plunge and at depth at the Windfall Lake gold deposit; the ability to realize upon any mineralization in a manner that is economic; the ability to complete any proposed exploration activities and the results of such activities; the continuity or extension of any mineralization; and any other information herein that is not a historical fact may be "forward-looking information". Any statement that involves discussions with respect to predictions, expectations, interpretations, beliefs, plans, projections, objectives, assumptions, future events or performance (often but not always using phrases such as "expects", or "does not expect", "is expected", "interpreted", "management's view", "anticipates" or "does not anticipate", "plans", "budget", "scheduled", "forecasts", "estimates", "believes" or "intends" or variations of such words and phrases or stating that certain actions, events or results "may" or "could", "would", "might" or "will" be taken to occur or be achieved) are not statements of historical fact and may be forward-looking information and are intended to identify forward-looking information.
This forward-looking information is based on reasonable assumptions and estimates of management of the Corporation, at the time it was made, involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Osisko to be materially different from any future results, performance or achievements expressed or implied by such forward-looking information. Such factors include, among others, risks relating to the ability of exploration activities (including drill results) to accurately predict mineralization; errors in management's geological modelling; the ability of Osisko to complete further exploration activities, including drilling; property interests in the Windfall Lake gold project; the ability of the Corporation to obtain required approvals and complete transactions on terms announced; the results of exploration activities; risks relating to mining activities; the global economic climate; metal prices; dilution; environmental risks; and community and non-governmental actions. Although the forward-looking information contained in this news release is based upon what management believes, or believed at the time, to be reasonable assumptions, Osisko cannot assure shareholders and prospective purchasers of securities of the Corporation that actual results will be consistent with such forward-looking information, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither Osisko nor any other person assumes responsibility for the accuracy and completeness of any such forward-looking information. Osisko does not undertake, and assumes no obligation, to update or revise any such forward-looking statements or forward-looking information contained herein to reflect new events or circumstances, except as may be required by law.

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